

Application No. 10/696,788
 Amendment Dated 9/2/2008
 Reply to Office Action of 05/30/2008

Remarks/Arguments

Claims 21-30 and 41-45 are pending in the application. Claims 31-40 were previously withdrawn from consideration as being drawn to a non-elected invention, and are now being canceled herein.

The examiner has rejected claims 21-30 and 41-45 under 35 USC 103(a) as being unpatentable over Diefus (USP No. 5534875) in view of Szczerbe (USP No. 6182007). The examiner points out that Diefus teaches measuring pitch and roll of a vehicular platform (column 7, lines 50-60). The examiner correlates the term "attitude" in Diefus with Applicants' claimed language of maximum slope of ground. Even assuming arguendo that such a correlation could be made, the combination still does not teach or suggest Applicants' claimed invention. For example, the examiner further associates "azimuth" in Diefus with Applicants' claimed language of an aspect angle which in Applicants' claim is defined as an angle between a direction of the maximum slope and an axis with which a direction of travel is coincident. However, an azimuth is the angle from due north when measured in an eastward direction along the horizon. As such no combination of references teaches "an aspect angle between a direction of the maximum slope and an axis with which a direction of travel is coincident."

The examiner acknowledges that Diefus fails to disclose establishing elevation data and corresponding location data for a work area divided into cells; determining location data, including a particular location of a vehicle within the work area, and guiding the vehicle steering in a direction of travel with compensation data based upon at least one of the estimated roll data and the pitch data such that an actual path of the vehicle follows a target path.

The examiner then relies on Szczerbe.

However, Szczerbe does not teach or suggest Applicant's claimed invention since Szczerbe teaches that the aspect angle is the orientation of a vehicle in relation to battlefield threats, column 3, lines 24-25.

As shown, neither Diefus nor Szczerbe, each separately or in combination, teaches or suggests Applicant's claimed invention of "an aspect angle between a direction of the maximum slope and an axis with which a direction of travel is coincident."

With respect to claims 28 and 30, the examiner has erred in stating that these claims are merely the methods by which one of ordinary skill would normally calculate pitch and roll angles. Applicants attorney respectfully disagrees. these claims

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specifically recite the aspect angle which is defined in the independent claim to be the angle between a direction of the maximum slope and an axis with which a direction of travel is coincident, which is not taught or suggested by any of the references, alone or in combination.

With respect to claim 44, Applicants' attorney could find no teaching in Diefes, as suggested by the examiner, that teaches or suggests a cell is less than or equal to a length of the vehicle. In Applicants' claimed invention, the work area is divided into cells which are traversed by the vehicle. The examiner appears to be stating that the "grid" of Diefes is on the vehicle or moves with the vehicle, which would teach away from Applicants' claimed invention.

The examiner has rejected claims 42 and 43 under 35 USC 103(a) as being unpatentable over Szczerba and Diefes as applied to the claims above and further in view of Staub (USP No.6236916). However, claims 42 and 43 claims static force balance equations and dynamic force balance equations that consider one or more of vehicle geometry, size, tire geometry, vehicle weight load, etc. which the examiner makes no mention of.

Since none of the references takes into consideration a maximum slope having nonzero values for a longitudinal component and a lateral component, and an aspect angle between the direction of the maximum slope and an axis ***with which a direction of travel is coincident***, when estimating roll or pitch data, none of the references teaches or suggests, alone or in any combination, Applicant's claimed invention.

In conclusion, it is believed that this application is in condition for allowance, and such allowance is respectfully requested.

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Any fees or charges due as a result of filing of the present paper may be charged against Deposit Account 04-0525.

Respectfully,

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